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Computer & Control Abstracts

Science Abstracts Series C
July–December 1990

Subject Index

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SIX-MONTHLY INDEXES TO COMPUTER & CONTROL ABSTRACTS

Twice a year as part of their subscription to Computer & Control Abstracts, subscribers receive cumulative indexes for the periods January-June and July-December. Each index is in two parts—a Subject Index, and an Author Index which comprises personal and corporate author indexes, and indexes to conferences, book titles, and bibliographies. The List of Journals abstracted by INSPEC is also included with the July-December issue of the Author Index, while the supplement to that List is included with the January-June issue. Cumulative indexes for earlier years are also available: for details please see the inside back cover.

Subject index

The Subject index provides an alphabetical subject key to the articles included in the abstracts journal. Some general guidance on its use is given below:

1 Look in the index for the name of the specific subject in which you are interested. In most cases this name will be a heading in the index and you will find relevant articles under it. The majority of the subject headings fall into the following categories: property, phenomenon, substance or named object, instrument, device, theory, method, process, application, event.

2. Occasionally you will be directed from the subject heading chosen to a different heading under which the relevant or additional articles are listed.

3. If you do not find the subject heading you first chose, try a more general heading.

4. Each entry under the heading relates to an article appearing in the abstracts journal and gives the serial number of that article in the journal preceded by the last digit of the current year, e.g. 0-12345, i.e. abstract number 12345 in the abstracts journal for 1990.
The language of the article, if it is not in English, is also indicated, e.g. processing of a program schema using a computer system (*Japanese*) 0-17185.

Each entry starts with a Keyword or Keyphrase considered to be most relevant to the heading. On sorting these Keywords, the qualifying prefixes are usually ignored. (e.g. α-brass, 5-sulphosalicylic, 31 Cygni, n-Ge are sorted under brass, sulphosalicylic, Cygni, Ge respectively).

There are three main Keyword lists: alphabetical A-Z, elementary particles, and chemical symbols (organic substances are written and not given as chemical formula). More than one Keyword list may be present under each subject heading.

For document on, say, 'photoemission of germanium' at least two access points 'photoemission' and 'germanium' are provided. Under the heading 'photoemission' the Keyword will be 'Ge' and under 'germanium' the Keyword will be 'photoemission'.

In a case like this, it is advisable and quicker to use the heading 'photoemission' and go straight to the chemical symbol list for 'Ge'.

Intermetallic compounds are indexed under the appropriate alloy headings. The chemical formula is used as Keyword. However, it is important to realise in searching the chemical symbol list that, at present, alloys and intermetallic compounds are sorted separately. For example FeCo is sorted at the end of the Fe- list e.g. Fe-Al,... Fe-Co,... Fe-Si,... Fe-Si-B,... FeCo,... FeSi and so on in this order.

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Computer & Control Abstracts

Science Abstracts Series C

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Subject Index

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Abbreviations and Acronyms

Abbreviations and acronyms are used in the modifiers in all INSPEC Cumulative Subject Indexes. Individual terms should be readily understood in the context of the subject heading.

1D	one dimensional
2D	two dimensional
3D	three dimensional
AC	alternating current
ACV	air cushion vehicle
A/D	analogue-to-digital
ADC	analogue-to-digital conversion
ADP	administrative data processing
ADPCM	adaptive differential pulse code modulation
AF	audio frequency
AFC	automatic frequency control
AFL	abstract family of languages
AGC	automatic gain control
AGR	advanced gas-cooled reactor
AGV	automatic guided vehicle
AI	artificial intelligence
ALU	arithmetic logic unit
ALV	autonomous land vehicle
AM	amplitude modulation
ANOVA	analysis of variance
ANSI	American National Standards Institute
AOI	automatic optical inspection
APC	adaptive predictive coding
APCM	adaptive pulse code modulation
ARMA	autoregressive moving average
ARQ	automatic repeat request
ASCII	American standard code for information interchange
ASIC	application specific integrated circuit
ASK	amplitude shift keying
AT&T	American Telephone & Telegraph
ATC	air traffic control
ATE	automatic test equipment
ATM	automatic teller machine
ATR	automatic target recognition
AVC	automatic volume control
BBC	British Broadcasting Corporation or Brown Boveri Corporation
BCD	binary-coded decimal
BCDMOS	bipolar-CMOS-DMOS
BEM	boundary element method
BER	bit error rate
BFL	buffered field effect transistor logic
BIBO	bounded input bounded output
BICMOS	bipolar-CMOS
BIST	built in self test
BIT	built in test
BOD	bistable optical device
Btx	Bildschirmtext
BVP	boundary value problem
BWR	boiling water reactor
C^2	command and control
C^3	command control and communications
C^3I	command control communications and intelligence
C^3L	complementary constant current logic
CAAB/AM	companded single sideband amplitude modulation
CAD	computer aided design
CADAT	computer aided design and testing
CADD	computer aided draughting and design
CAE	computer aided engineering
CAI	computer assisted instruction
CAL	computer aided learning
CAM	computer aided manufacturing or content addressable memory
CAR	computer aided retrieval
CASE	computer aided software engineering
CAT	computer assisted tomography or computerised axial tomography
CATV	community antenna TV
CB	citizens' band
CBI	computer based instruction
CBT	computer based training
CCD	charge-coupled device
CCITT	International Telephone & Telegraph Consultative Committee
CCL	capacitor coupled logic
CCTV	closed circuit television
CD	compact disc
CDM	code division multiplexing
CDMA	code division multiple access
CD-ROM	compact disc ROM
CECL	cascade-emitter coupled logic
CEGB	Central Electricity Generating Board
CELP	code excited linear prediction
CERN	European Council for Nuclear Research
CFG	context free grammar
CFL	context free language
CFSK	coherent frequency shift keying
CGH	computer-generated holography (-gram)
CIM	computer integrated manufacture
CISC	complex instruction set computer
CMI	computer managed instruction
CML	current mode logic
CMOS	complementary metal oxide semiconductor
CNC	computerised numerical control
CNR	carrier to noise ratio
COM	computer output to microform (fiche or film)
COVA	computer code validation
CPA	critical path analysis
CPM	continuous phase modulation or critical path method
CPU	central processing unit
CRO	cathode ray oscilloscope
CRT	cathode ray tube
CSMA	carrier sense multiple access

CSMA/CD	CSMA with collision detection
CT	computerised tomography
CTL	complementary-transistor logic
CW	continuous wave
D/A	digital-to-analogue
DAC	digital-to-analogue conversion
DAD	digital audio disc
DAMA	demand assigned multiple access
DASD	direct access storage device
DATAC	digital autonomous terminal access communication
DBMS	database management system
DBS	direct broadcasting by satellite
DC	direct current
DCFL	direct-coupled field effect transistor logic
DCTL	direct-coupled transistor logic
DDC	direct digital control
DDL	diode-diode logic
DES	data encryption standard
DFT	discrete Fourier transform
DIP	dual in-line package
DM	delta modulation
DMA	direct memory access
DMM	digital multimeter
DNA	digital network architecture
DNTS	digital data exchange network testing system
DoD	Department of Defense (USA)
DOF	degree of freedom
DOS	disc operating system
DP	data processing
DPCM	differential pulse code modulation
DPDA	deterministic pushdown automaton
DRAM	dynamic RAM
DSO	digital storage oscilloscope
DSS	decision support system
DS-SSMA	direct sequence-spread spectrum multiple access
DSI	digital speech interpolation
DSP	digital signal processing
DTL	diode transistor logic
DVM	digital voltmeter
EAROM	electrically alterable ROM
EAX	electronic automatic exchange
ECC	error correction code
ECG	electrocardiography (-gram)
ECL	emitter coupled logic
EDIF	electronic data interchange format
EDP	electronic data processing
EEG	electroencephalography (-gram)
EEPLD	electrically erasable programmable logic device
EEPROM	electrically erasable PROM
E^{2}PROM	
EFL	emitter follower logic or emitter function logic
EFT	electronic funds transfer
EHV	extra high voltage
ELF	extremely low frequency
EM	electromagnetic
EMC	electromagnetic compatibility
EMF	electromotive force
EMG	electromyography (-gram)
EMI	electromagnetic interference
EOF	end of file
EOQ	economic order quantity
EPA	Environmental Protection Agency (USA)
EPROM	erasable PROM
ESA	European Space Agency
ESOC	European Space Operations Centre
ESPRIT	European Strategic Programme for Research in Information Technology
ESS	electronic switching system
EX-OR	exclusive OR
FAMOS	floating gate avalanche MOS
FBR	fast breeder reactor
FDDI	fibre distributed data interface
FDM	frequency division multiplex(ing)
FDMA	frequency division multiple access
FEA	finite element analysis
FECL	feedback emitter coupled logic
FEM	finite element method
FET	field effect transistor
FFT	fast Fourier transform
FIFO	first in first out
FIR	finite impulse response
FLOPS	floating point operation per second
FM	frequency modulation
FMS	flexible manufacturing system or flight management system
FPLA	field programmable logic array
FSK	frequency-shift keying
GAMBIT	gate modulated bipolar transistor
GKS	Graphical Kernel System
GMDH	group method of data handling
GPIB	general purpose interface bus
GTO	gate turn-off
HBT	heterojunction bipolar transistor
HDLC	high level data link control
HF	high frequency
HFET	heterojunction field effect transistor
HLL	high level language
HTGR	high temperature gas-cooled reactor
HV	high voltage
HVAC	heating, ventilation and air conditioning
HVIC	high voltage integrated circuit
HWR	heavy water reactor
IC	integrated circuit
IDFL	integral diode FET logic
IF	intermediate frequency
IFE	intelligent front end
IGBT	insulated gate bipolar transistor
IGES	Initial Graphics Exchange Specification
IGFET	insulated gate field effect transistor
I^{2}L	integrated injection logic
I^{3}L	isoplanar I^{2}L
IIR	infinite impulse response
IKBS	intelligent knowledge based system

ILS	instrument landing system
IMPATT	impact avalanche transit time
INS	inertial navigation system or information network system
INTELSAT	international telecommunications satellite consortium
I/O	input/output
IPSE	integrated programming support environment or project support environment
IPSS	international packet switching system
IR	infrared
IRS	information retrieval system
ISDN	integrated services digital network
ISDSN	integrated services digital satellite network
ISFET	ion-sensitive field effect transistor
ISI	intersymbol interference
ISL	integrated Schottky logic
ISO	International Standards Organization
IT	information technology
ITU	International Telecommunication Union
IVP	initial value problem
JCL	job control language
JFET	junction field effect transistor
JIT	just in time
JTIDS	joint tacticle information distribution system
KBS	knowledge based system
LAN	local area network
LC	inductance-capacitance
LCD	liquid crystal display/device
LD	laser diode
LED	light emitting diode
LF	low frequency
LIFO	last in first out
LOS	line of sight
LP	linear programming
LPC	linear predictive coding
LQG	linear quadratic Gaussian
LSA	least squares approximation
LSI	large-scale integration
LV	low voltage
LWR	light water reactor
MAN	metropolitan area network
MAP	manufacturing automation protocol
MATE	modular automatic test equipment
MESFET	metal-semiconductor field effect transistor
MF	medium frequency
MHD	magnetohydrodynamics
MHS	message handling system
MIDI	musical instruments digital interface
MIL-STD	Military Standard
MIMD	multiple instruction multiple data
MIMIC	millimetre-wave monolithic integrated circuit
MIMO	multiple input multiple output
MIPS	million instructions per second

MIS	metal-insulator-semiconductor or management information system
MISFET	metal insulator semiconductor field effect transistor
MISO	multiple input single output
MIT	Massachusetts Institute of Technology
MMI	man machine interface
MMU	memory management units
MNOS	metal-nitride-oxide-semiconductor
MODFET	modulation doped field effect transistor
MOS	metal-oxide-semiconductor
MOSFET	metal-oxide-semiconductor field effect transistor
MOST	metal-oxide-semiconductor transistor
MRAC	model reference adaptive control
MRP	materials requirements planning
MRP II	manufacturing resources planning
MS	management science
MSE	mean square error
MSI	medium scale integration
MTBF	mean time between failures
MTL	merged transistor logic
MTTF	mean time to failure
NAND	not-and(logic)
NAPLPS	North American Presentation Level Protocol Syntax
NBFM	narrowband frequency and modulation
NC	numerical control
NDT	nondestructive testing
NGS	nuclear generating station
NHS	National Health Service
NLP	natural language processing
NMOS	N-channel metal-oxide-semiconductor
NMR	nuclear magnetic resonance
NOR	not-or(logic)
NPP	nuclear power plant
NRZ	non-return to zero
NTL	nonthreshold logic
NVRAM	nonvolatile random access memory
OA	office automation
OCR	optical character recognition
ODA	office document architecture
ODE	ordinary differential equation
OEM	original equipment manufacture(r)
ONA	open network architecture
OR	operations research
OS	operating system
OSI	Open Systems Interconnection
PABX	private automatic branch exchange
PACS	picture archiving and communication systems
PAL	programmable array logic
PAM	pulse amplitude modulation
PBT	permeable base transistor
PBX	private branch exchange
PC	printed circuit or personal computer or programmable controller

PCB	printed circuit board
PCM	pulse code modulation
PDE	partial differential equation
PEEL	programmable electrically erasable logic
PF	power factor
PFM	pulse frequency modulation
PID (PI, PD)	proportional+integral+differential (derivative)
PLA	phase locked array or programmable logic array
PLC	programmable logic controller
PLD	programmable logic device
PLL	phase locked loop
PM	pulse modulation
PMOS	P-channel metal-oxide-semiconductor
POS	point of sale
PROM	programmable read-only memory
PSDN	packet switched data network
PSK	phase shift keying
PSS	packet switching service or Packet SwitchStream
PSTN	public switched telephone network
PTFE	polytetrafluoroethylene
PTM	pulse time modulation
PVC	polyvinylchloride
PWM	pulse width modulation
PWR	pressurised water reactor

QA	quality assurance
QC	quality control

RAM	random access memory or reliability, availability and maintainability
RC	resistance-capacitance
RCTL	resistor-capacitor-transistor logic
R & D	research and development
RDBMS	relational database management system
RDS	radio data systems
RF	radio frequency
RFI	radio frequency interference
RISC	reduced instruction set computer
RLC	resistance-inductance-capacitance
RMS	root-mean-square
ROM	read-only memory
RPM	revolutions/minute
RPV	remote piloted vehicle
RTL	resistor-transistor logic
RTTY	remote teletype terminal

SAN	small area network
SAM	serial access memory
SAR	synthetic aperture radar
SCFL	source coupled field effect transistor logic
SCR	silicon controlled rectifier
SCSI	small computer system interface
SDFL	Schottky diode field effect transistor logic
SDI	selective dissemination of information or Strategic Defense Initiative
SDLC	synchronous data link control
SDM	space division multiplexing
SDMA	space division multiple access
SFL	substrate fed logic
S/H	sample and hold
SIMD	single instruction multiple data
SISO	single input single output
SLIC	subscriber line interface circuit
SMD	surface mount device
S/N	signal-to-noise
SNA	Systems Network Architecture
SNR	signal to noise ratio
SOA	safe operating area
SOIC	small outline integrated circuit
SOR	successive over-relaxation
SOS	silicon on sapphire
SOT	small outline transistor
SPC	statistical process control or stored program control
SQC	statistical quality control
SQL	standard query language
SRAM	static random access memory
SSB	single sideband
SSFL	Schottky-barrier coupled Schottky-barrier gate FET logic
SSI	small scale integration
SST	supersonic transport
SS-TDMA	satellite switched time division multiple access
STD	subscriber trunk dialling
STI	scientific and technical information
STL	Schottky transistor logic
STOL	short take-off and landing
SW	short wave
SWR	standing wave ratio

TASI	time assignment speech interpolation
TCAS	traffic alert and collision avoidance system
TDF	transborder data flow
TDM	time division multiplex(ing)
TDMA	time divison multiple access
TOP	technical office protocol
TTL	transistor transistor logic
TTY	teletype terminal
TV	television

UART	universal asynchronous receiver transmitter
UHF	ultra high frequency
UHV	ultra high voltage
UIMS	user interface management system
ULA	uncommitted logic array
ULF	ultra low frequency
ULSI	ultra-large scale integration
US	ultrasonic
USART	universal synchronous/asynchronous receiver transmitter
UV	ultraviolet

VAN	value added network
VCR	video cassette recorder
VDT	visual display terminal
VDU	visual display unit
VFD	vacuum fluorescent display

VHF	very high frequency
VHSIC	very high speed integrated circuit
VLF	very low frequency
VLSI	very large scale integration
VM	virtual machine
VMOS	vertical channel MOS
VRAM	video random access memory
VRC	visual record computer
VS	virtual storage
VTOL	vertical take-off and landing
VTR	voltage transformation ratio or video tape recorder
WAN	wide area network
WDM	wavelength division multiplex(ing)
WORM	write once read many times
WP	word processing
WSI	wafer scale integration
XOR	exclusive OR

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FDM *see frequency division multiplexing*

FDM/TDM translation *see transmultiplexing*

FDMA *see frequency division multiple access*

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IF amplifiers *see intermediate-frequency amplifiers*
IGFET *see insulated gate field effect transistors*
ignition
  see also electric ignition
  No entries
ignitrons *see mercury arc rectifiers*
IIR filters *see digital filters*
IKBS *see knowledge based systems*
I^2L *see integrated injection logic*
illumination *see lighting*
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LEC growth *see crystal growth from melt*

Lecher wires *see high-frequency transmission lines*

LED *see light emitting diodes*

LED displays *see electroluminescent displays*

legal data processing *see law administration*

legal protection of software *see industrial property*

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MR imaging (biomedical) *see biomedical NMR*
MRI (medical) *see biomedical NMR*
MRP *see manufacturing data processing; operations research; production control*
MRP II *see manufacturing data processing; operations research; production control*
MSK *see minimum shift keying*
MTF (optical) *see optical transfer function*
MTL *see integrated injection logic*
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PBX *see private telephone exchanges*
PCB *see printed circuits*
PCB accessories *see printed circuit accessories*
PCB design *see printed circuit design*
PCB manufacture *see printed circuit manufacture*
PCB testing *see printed circuit testing*
PCM *see pulse-code modulation*
PCM (computing industry) *see DP industry*
PCM links *see pulse-code modulation links*
P^{2}CMOS *see CMOS integrated circuits*
PD control *see two-term control*
peaking circuits *see differentiating circuits*
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tool for AI, conf. Fairfax, VA, USA (Oct. 1989) 0—52688
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